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Cotton Division

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FIBER AND SPINNING TEST RESULTS FOR SOME VARIETIES OF COTTON GROWN BY SELECTED COTTON IMPROVEMENT GROUPS

CROP OF 1956

Prepared in the Standards and Testing Branch

Agriculture - Washington

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 12-1/2 pounds per hour, crop of 1956

Test item	Lockett 88
	Texas
	Vernon
	Early
Raw Cotton Quality	
Grade (official standards)	SM
Staple length----inches	29/32
Fiber length (Fibrograph):	
Upper half mean----inches	.80
Uniformity ratio----	80
Micronaire----units 1/	3.7
Fiber fineness----micrograms per in. 2/	4.1
Fiber maturity----index 2/	72
Fiber tensile strength (Pressley):	
1/8" gauge----index 3/	93
Zero gauge----1,000 p.s.i.	89
Nonlint content----percent	1.5
Color of raw cotton: 4/	
Reflectance----R_d	74.6
Yellowness----+b	9.3
Sugar content----percent	0.3
Acid-alkaline value----pH units 5/	7.0
Processing Results	
Picker and card waste----percent	7.7
Neps----per 100 sq. in. of card web	16
Yarn skein strength:	
8s----pounds	329
22s----pounds	101
Average break factor 6/	2427
Yarn appearance:	
8s----grade	B
22s----grade	C+
Average index 7/	105

1/ Fiber fineness and maturity in combination, as measured on untreated samples.
2/ Determined by the Causticaire method using the Micronaire instrument.
3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.
4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. R_d values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.
5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.
6/ Based on yarn skein strength of the two yarn numbers spun.
7/ Based on two numbers spun. Index of average quality equals 100.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956

Test item	Coker 100 W				
	Alabama			Georgia	
	Thomasville	Troy	Wetumpka	Arlington	Madison
	Early	Early	Early	Midseason	Early
Raw Cotton Quality					
Grade (official standards)	M	Mltsp	M	M	M
Staple length------------------inches	1-1/16	1-1/16	1-1/32	1-1/32	1-1/16
Fiber length (Fibrograph):					
Upper half mean--------------inches	1.04	1.06	1.06	1.04	1.02
Uniformity ratio------------------	77	77	77	80	80
Micronaire------------------units 1/	4.0	3.7	3.3	3.8	4.0
Fiber fineness--micrograms per in. 2/	4.0	3.8	3.7	3.9	4.0
Fiber maturity---------------index 2/	77	74	69	74	78
Fiber tensile strength (Pressley):					
1/8" gauge-----------------index 3/	99	100	101	88	105
Zero gauge------------1,000 p.s.i.	83	76	78	72	78
Nonlint content---------------percent	2.2	2.8	2.7	3.2	3.2
Color of raw cotton: 4/					
Reflectance----------------------R_d	76.5	76.4	74.9	71.6	71.2
Yellowness----------------------+b	9.0	9.1	8.9	8.7	9.3
Sugar content-----------------percent	0.2	0.3	0.2	0.3	0.2
Acid-alkaline value-------pH units 5/	7.6	7.5	7.5	7.2	7.0
Processing Results					
Picker and card waste---------percent	6.9	7.7	7.5	8.4	9.1
Neps------per 100 sq. in. of card web	16	16	15	13	24
Yarn skein strength:					
22s-------------------------pounds	122	120	126	119	119
50s-------------------------pounds	42	42	44	42	42
Average break factor 6/	2392	2370	2486	2359	2359
Yarn appearance:					
22s--------------------------grade	C+	C+	C+	B	C+
50s--------------------------grade	C	C	C	C+	C
Average index 7/	95	95	95	105	95

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Coker 100 W			Deltapine 15	
	Mississippi	South Carolina		Arkansas	
	Greenwood	Allendale	Chester	Bradley	Leachville
	Early	Early	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	SLM	M	M	M	M
Staple length-----------------inches	1-1/16	1-1/16	1-1/16	1-1/32	1-3/32
Fiber length (Fibrograph):					
Upper half mean--------------inches	1.08	1.08	1.08	1.00	1.10
Uniformity ratio------------------	81	80	81	80	80
Micronaire-------------------units 1/	3.8	4.2	3.8	4.1	4.4
Fiber fineness--micrograms per in. 2/	4.0	4.3	4.1	4.3	4.3
Fiber maturity---------------index 2/	74	78	74	77	80
Fiber tensile strength (Pressley):					
1/8" gauge-----------------index 3/	104	103	98	102	109
Zero gauge-------------1,000 p.s.i.	83	79	77	88	85
Nonlint content---------------percent	3.5	2.1	2.2	2.4	2.1
Color of raw cotton: 4/					
Reflectance---------------------R_d	74.9	72.6	74.8	75.5	74.4
Yellowness----------------------+b	8.4	9.2	8.9	9.3	8.7
Sugar content-----------------percent	0.2	0.3	0.2	0.2	0.1
Acid-alkaline value-------pH units 5/	7.3	7.1	7.5	7.2	7.7
Processing Results					
Picker and card waste---------percent	8.2	6.2	6.4	6.9	7.6
Neps------per 100 sq. in. of card web	15	8	7	10	15
Yarn skein strength:					
22s-------------------------pounds	134	128	128	126	133
50s-------------------------pounds	48	48	44	44	45
Average break factor 6/	2674	2608	2508	2486	2588
Yarn appearance:					
22s--------------------------grade	B	B	B+	B	B
50s--------------------------grade	C+	C+	C+	C+	C+
Average index 7/	105	105	110	105	105

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

	Deltapine 15				
	Arkansas				Louisiana
	Marked Tree	Marianna	Osceola	Pine Bluff	Bossier City
	Early	Early	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	Mltsp	Mltsp	M	M	SM
Staple length----------------inches	1-1/16	1-1/32	1-1/16	1-3/32	1-1/32
Fiber length (Fibrograph):					
Upper half mean------------inches	1.04	1.03	1.05	1.07	1.03
Uniformity ratio-----------------	80	82	80	82	81
Micronaire-----------------units 1/	4.2	4.1	4.0	4.1	4.4
Fiber fineness-micrograms per in. 2/	4.2	4.0	4.1	4.3	4.3
Fiber maturity-------------index 2/	78	79	76	77	80
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	110	103	108	111	108
Zero gauge-----------1,000 p.s.i.	86	85	85	83	87
Nonlint content-------------percent	2.7	2.6	2.6	2.4	2.0
Color of raw cotton: 4/					
Reflectance--------------------R_d	73.3	72.5	71.4	76.1	76.1
Yellowness--------------------+b	9.1	8.8	8.8	8.7	9.4
Sugar content--------------percent	0.1	0.2	0.1	0.1	0.3
Acid-alkaline value-----pH units 5/	8.3	7.5	8.1	7.3	7.3
Processing Results					
Picker and card waste-------percent	8.6	8.0	8.6	6.5	6.9
Neps----per 100 sq. in. of card web	10	12	12	9	11
Yarn skein strength:					
22s-----------------------pounds	125	118	121	133	125
50s-----------------------pounds	43	42	41	47	42
Average break factor 6/	2450	2348	2356	2638	2425
Yarn appearance:					
22s------------------------grade	B+	B	B	B	B
50s------------------------grade	C+	C	C	C+	C+
Average index 7/	110	100	100	105	105

Continued on page 6

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

	Deltapine 15				
	Louisiana				
	Cheneyville	Lake Providence	Mer Rouge	Natchitoches	Shreveport
	Early	Early	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	SLM	M	M	M	M
Staple length----------------inches	1-1/16	1-3/32	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):					
Upper half mean------------inches	1.06	1.08	.97	1.02	.98
Uniformity ratio-----------------	82	80	79	78	80
Micronaire----------------units 1/	4.6	4.0	4.6	4.1	4.1
Fiber fineness-micrograms per in.2/	4.5	4.1	4.7	4.0	4.2
Fiber maturity------------index 2/	81	76	80	78	77
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	103	108	105	105	113
Zero gauge-----------1,000 p.s.i.	80	81	85	82	89
Nonlint content------------percent	2.7	1.8	3.1	2.7	1.8
Color of raw cotton: 4/					
Reflectance-------------------Rd	71.3	72.5	71.4	74.5	72.4
Yellowness--------------------+b	8.9	9.4	9.3	9.1	9.7
Sugar content--------------percent	0.1	0.1	0.2	0.2	0.1
Acid-alkaline value-----pH units 5/	7.6	7.1	7.6	7.3	7.7
Processing Results					
Picker and card waste-------percent	7.5	7.0	7.9	7.8	7.7
Neps----per 100 sq. in. of card web	12	14	8	21	16
Yarn skein strength:					
22s-----------------------pounds	118	125	122	118	124
50s-----------------------pounds	41	44	41	40	43
Average break factor 6/	2323	2475	2367	2298	2439
Yarn appearance:					
22s-----------------------grade	B	C+	B+	C+	B
50s-----------------------grade	C+	C	C+	D+	C+
Average index 7/	105	95	110	90	105

Continued on page 7

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

	Deltapine 15				
	Louisiana			Mississippi	
	Tallulah	Villa Platte	Winnsboro	Belzoni	Fayette
	Early	Midseason	Early	Early	Early
Raw Cotton Quality					
Grade (official standards)	SLM	SLM	M	M+	M
Staple length------------------inches	1-3/32	1-1/16	1-1/16	1-3/32	1-1/16
Fiber length (Fibrograph):					
Upper half mean--------------inches	1.08	1.00	.96	1.02	.96
Uniformity ratio-------------------	81	82	80	80	82
Micronaire------------------units 1/	4.6	4.6	4.6	4.4	4.9
Fiber fineness--micrograms per in. 2/	4.6	4.6	4.6	4.4	4.8
Fiber maturity---------------index 2/	80	79	80	80	81
Fiber tensile strength (Pressley):					
1/8" gauge-----------------index 3/	105	100	102	107	100
Zero gauge------------1,000 p.s.i.	85	84	84	85	78
Nonlint content--------------percent	3.2	4.3	2.7	2.5	2.3
Color of raw cotton: 4/					
Reflectance----------------------Rd	73.5	70.0	72.9	75.5	72.6
Yellowness-----------------------+b	8.1	8.3	9.0	8.4	9.5
Sugar content-----------------percent	0.1	0.1	0.2	0.2	0.2
Acid-alkaline value-------pH units 5/	8.6	8.7	7.9	7.4	7.6
Processing Results					
Picker and card waste---------percent	8.1	9.1	8.5	7.4	6.0
Neps------per 100 sq. in. of card web	6	4	6	10	10
Yarn skein strength:					
22s-----------------------pounds	127	113	115	122	118
50s-----------------------pounds	44	40	39	44	39
Average break factor 6/	2497	2243	2240	2442	2273
Yarn appearance:					
22s-------------------------grade	B+	B	B	B	B+
50s-------------------------grade	C+	C+	C+	C	C+
Average index 7/	110	105	105	100	110

Continued on page 8

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15				
	Mississippi				Texas
	Greenville	Macon	Magee	Tunica	Bryan
	Early	Early	Early	Early	Late
Raw Cotton Quality					
Grade (official standards)	SLM	SLM	M	M	M
Staple length----------------inches	1-1/32	1-1/32	1-1/16	1-3/32	1-1/16
Fiber length (Fibrograph):					
Upper half mean------------inches	1.03	1.00	1.00	1.02	1.00
Uniformity ratio-----------------	81	80	80	80	82
Micronaire-----------------units 1/	4.4	3.8	4.4	4.0	4.7
Fiber fineness-micrograms per in.2/	4.5	4.0	4.6	4.0	4.5
Fiber maturity-------------index 2/	78	74	79	77	82
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	108	103	98	105	102
Zero gauge-----------1,000 p.s.i.	84	83	80	83	79
Nonlint content-------------percent	3.8	3.8	2.8	2.2	2.7
Color of raw cotton: 4/					
Reflectance-------------------R_d	70.0	74.0	74.5	72.5	78.1
Yellowness--------------------+b	8.7	8.9	8.9	8.7	8.9
Sugar content---------------percent	0.2	0.3	0.2	0.2	0.3
Acid-alkaline value-----pH units 5/	8.2	7.4	7.9	7.3	7.5
Processing Results					
Picker and card waste-------percent	10.2	9.1	7.5	7.9	7.2
Neps---per 100 sq. in. of card web	11	10	10	24	11
Yarn skein strength:					
22s-----------------------pounds	117	125	113	129	120
50s-----------------------pounds	39	43	37	45	41
Average break factor 6/	2262	2450	2168	2544	2345
Yarn appearance:					
22s------------------------grade	B	B	B+	C+	B+
50s------------------------grade	C+	C	C+	C	B
Average index 7/	105	100	110	95	115

Continued on page 9

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15			DPL Fox	DPL (TPSA)
	Texas			Mississippi	Texas
	Navasota	Texarkana		Gunnison	Danevang
	Late	Early	Midseason	Early	Late
Raw Cotton Quality					
Grade (official standards)	SLM	Mltsp	M	M	SLM
Staple length----------------inches	1	1-1/32	1	1-1/16	1-1/32
Fiber length (Fibrograph):					
Upper half mean------------inches	1.02	1.00	1.00	1.06	.97
Uniformity ratio-----------------	80	82	80	81	82
Micronaire----------------units 1/	4.2	3.6	4.0	4.3	3.9
Fiber fineness-micrograms per in. 2/	4.3	3.8	4.2	4.4	4.0
Fiber maturity-------------index 2/	78	74	77	78	76
Fiber tensile strength (Pressley):					
1/8" gauge---------------index 3/	108	108	107	109	103
Zero gauge-----------1,000 p.s.i.	80	82	84	82	80
Nonlint content------------percent	3.3	2.6	2.4	2.0	3.0
Color of raw cotton: 4/					
Reflectance--------------------R_d	71.4	72.0	75.5	75.0	70.5
Yellowness--------------------+b	9.2	10.1	9.0	8.8	8.9
Sugar content--------------percent	0.3	0.3	0.2	0.1	0.2
Acid-alkaline value-----pH units 5/	7.2	7.4	7.3	7.5	7.5
Processing Results					
Picker and card waste-------percent	8.7	8.4	8.0	7.3	7.8
Neps----per 100 sq. in. of card web	11	25	15	11	13
Yarn skein strength:					
22s-----------------------pounds	118	119	119	123	118
50s-----------------------pounds	41	41	41	42	40
Average break factor 6/	2323	2334	2334	2403	2298
Yarn appearance:					
20s-----------------------grade	B	C+	C+	B+	B+
50s-----------------------grade	C+	C	C	B	C+
Average index 7/	105	95	95	115	110

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

	Empire	Lankart 57		
	Georgia	Texas		
	Atlanta	Cooper		Hillsboro
	Early	Midseason	Late	Midseason
Raw Cotton Quality				
Grade (official standards)	M	SMltsp	SMltsp	SMltsp
Staple length------------------inches	1-1/32	7/8	7/8	7/8
Fiber length (Fibrograph):				
Upper half mean---------------inches	1.02	.85	.89	.83
Uniformity ratio--------------------	81	79	78	80
Micronaire-------------------units 1/	4.4	3.8	3.7	3.7
Fiber fineness---micrograms per in. 2/	4.5	4.1	3.9	3.9
Fiber maturity----------------index 2/	78	74	74	74
Fiber tensile strength (Pressley):				
1/8" gauge------------------index 3/	101	93	92	92
Zero gauge--------------1,000 p.s.i.	83	86	83	86
Nonlint content----------------percent	3.6	3.4	2.9	4.8
Color of raw cotton: 4/				
Reflectance----------------------R_d	72.5	72.5	74.5	74.5
Yellowness-----------------------+b	9.1	10.6	9.6	9.6
Sugar content------------------percent	0.2	0.3	0.3	0.2
Acid-alkaline value--------pH units 5/	7.9	6.7	7.0	7.3
Processing Results				
Picker and card waste----------percent	8.9	10.2	11.1	11.2
Neps-------per 100 sq. in. of card web	11	12	15	16
Yarn skein strength:				
22s---------------------------pounds	119	100	95	98
50s---------------------------pounds	41	32	30	32
Average break factor 6/	2334	1900	1795	1878
Yarn appearance:				
22s----------------------------grade	B	B	C+	C+
50s----------------------------grade	C+	C	C	D+
Average index 7/	105	100	95	90

Continued on page 11

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

	Lankart 57			Northern Star
	Texas			
	Hillsboro	Waco	Waxahachie	O'Brien
	Late	Midseason	Midseason	Early
Raw Cotton Quality				
Grade (official standards)	Mltsp	Mltsp	Mltsp	M
Staple length------------------inches	7/8	7/8	29/32	1-1/32
Fiber length (Fibrograph):				
Upper half mean---------------inches	.86	.83	.90	1.00
Uniformity ratio-------------------	80	80	81	81
Micronaire-------------------units 1/	3.8	3.8	4.0	4.2
Fiber fineness---micrograms per in. 2/	4.1	4.3	4.2	4.4
Fiber maturity----------------index 2/	74	73	76	77
Fiber tensile strength (Pressley):				
1/8" gauge-----------------index 3/	91	97	97	102
Zero gauge-------------1,000 p.s.i.	83	82	84	81
Nonlint content----------------percent	5.3	3.2	5.3	3.5
Color of raw cotton: 4/				
Reflectance-----------------------R_d	69.0	73.5	71.3	75.4
Yellowness-----------------------+b	9.7	10.0	9.9	8.9
Sugar content-----------------percent	0.2	0.3	0.2	0.3
Acid-alkaline value--------pH units 5/	7.1	6.8	6.9	7.2
Processing Results				
Picker and card waste---------percent	11.6	9.3	11.0	7.7
Neps-------per 100 sq. in. of card web	16	12	9	14
Yarn skein strength:				
22s-------------------------pounds	97	99	107	118
50s-------------------------pounds	31	31	35	40
Average break factor 6/	1842	1864	2052	2298
Yarn appearance:				
22s--------------------------grade	C+	B	B	B
50s--------------------------grade	C	C+	C	C+
Average index 7/	95	105	100	105

Continued on page 12

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Stardel	Stoneville 2B	Stoneville 7	Stoneville 3202
	Louisiana	Arkansas		Mississippi
	Gilliam	McGehee	Leachville	Leland
	Early	Early	Early	Early
Raw Cotton Quality				
Grade (official standards)	M	Mltsp	SM	M
Staple length------------------inches	1-1/16	1-1/32	1-3/32	1-1/32
Fiber length (Fibrograph):				
Upper half mean---------------inches	1.06	1.03	1.02	1.05
Uniformity ratio-------------------	79	82	80	81
Micronaire-------------------units 1/	4.1	3.9	4.2	4.1
Fiber fineness---micrograms per in. 2/	4.1	4.2	4.5	4.4
Fiber maturity----------------index 2/	77	74	76	76
Fiber tensile strength (Pressley):				
1/8" gauge------------------index 3/	122	96	102	100
Zero gauge-------------1,000 p.s.i.	91	81	79	84
Nonlint content---------------percent	2.3	3.2	1.6	3.6
Color of raw cotton: 4/				
Reflectance---------------------Rd	75.5	71.4	76.1	72.9
Yellowness----------------------+b	8.5	8.3	8.2	8.3
Sugar content-----------------percent	0.2	0.2	0.1	0.2
Acid-alkaline value--------pH units 5/	7.6	7.7	7.8	7.6
Processing Results				
Picker and card waste----------percent	7.0	8.2	7.8	8.4
Neps-------per 100 sq. in. of card web	17	12	14	10
Yarn skein strength:				
22s--------------------------pounds	127	114	112	108
50s--------------------------pounds	43	39	38	38
Average break factor 6/	2474	2229	2182	2138
Yarn appearance:				
22s---------------------------grade	B	B	B	B+
50s---------------------------grade	C	C	C+	C+
Average index 7/	100	100	105	110

1/ Fiber fineness and maturity in combination, as measured on untreated samples.

2/ Determined by the Causticaire method using the Micronaire instrument.

3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. R_d values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.

5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.

6/ Based on yarn skein strength of the two yarn numbers spun.

7/ Based on two numbers spun. Index of average quality equals 100.

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 6-1/2 pounds per hour, crop of 1956

Test item	Acala 1517 BR	Coker 100 W	Deltapine 15	
	Texas	Mississippi	Arkansas	Mississippi
	Stanton	Greenwood	Leachville	Tunica
	Early	Early	Early	Early
Raw Cotton Quality				
Grade (official standards)	SM	SLM	M	M
Staple length------------------inches	1-3/32	1-1/16	1-3/32	1-3/32
Fiber length (Fibrograph):				
Upper half mean---------------inches	1.10	1.08	1.10	1.02
Uniformity ratio-------------------	82	81	80	80
Micronaire------------------units 1/	4.4	3.8	4.4	4.0
Fiber fineness---micrograms per in. 2/	4.2	4.0	4.3	4.0
Fiber maturity--------------index 2/	81	74	80	77
Fiber tensile strength (Pressley):				
1/8" gauge-----------------index 3/	110	104	109	105
Zero gauge-------------1,000 p.s.i.	90	83	85	83
Nonlint content----------------percent	1.1	3.5	2.1	2.2
Color of raw cotton: 4/				
Reflectance----------------------R_d	78.6	74.9	74.4	72.5
Yellowness-----------------------+b	8.4	8.4	8.7	8.7
Sugar content-----------------percent	0.2	0.2	0.1	0.2
Acid-alkaline value--------pH units 5/	7.2	7.3	7.7	7.3
Processing Results				
Picker and card waste---------percent	6.9	8.1	7.8	7.6
Comber waste------------------percent	14.2	15.1	14.9	18.5
Neps-------per 100 sq. in. of card web	14	10	12	21
Yarn skein strength: 6/				
22s--------------------------pounds	144 (157)	134 (148)	130 (146)	128 (144)
50s--------------------------pounds	52 (56)	47 (53)	46 (51)	44 (50)
Average break factor 7/	2884 (3127)	2649 (2953)	2580 (2881)	2508 (2834)
Yarn appearance: 6/				
22s---------------------------grade	B (B+)	B (B+)	B (B+)	B (B+)
50s---------------------------grade	C+(B)	C+(B)	C+(B)	C+(C+)
Average index 8/	105 (115)	105 (115)	105 (115)	105 (110)

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Table 3.--Results of classification fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton grown in designated market areas, processed at a card production rate of 6-1/2 pounds per hour, crop of 1956--Continued

Test item	Delfos 9169		
	Arkansas	Mississippi	
	Pine Bluff	Belzoni	Leland
	Early	Early	Early
Raw Cotton Quality			
Grade (official standards)	M	SM	SLM+
Staple length----------------------inches	1-1/32	1-3/32	1-1/16
Fiber length (Fibrograph):			
Upper half mean-------------------inches	1.08	1.06	1.11
Uniformity ratio----------------------	79	78	74
Micronaire-----------------------units 1/	4.0	4.1	4.2
Fiber fineness-------micrograms per in. 2/	3.9	4.0	4.3
Fiber maturity-------------------index 2/	78	78	77
Fiber tensile strength (Pressley):			
1/8" gauge---------------------index 3/	95	95	97
Zero gauge-----------------1,000 p.s.i.	80	78	77
Nonlint content-------------------percent	2.0	2.8	3.5
Color of raw cotton: 4/			
Reflectance--------------------------R_d	77.1	77.0	74.4
Yellowness--------------------------+b	8.6	8.2	8.6
Sugar content---------------------percent	0.2	0.2	0.3
Acid-alkaline value-----------pH units 5/	7.6	7.4	7.2
Processing Results			
Picker and card waste-------------percent	7.3	7.8	8.7
Comber waste----------------------percent	17.3	17.8	17.3
Neps----------per 100 sq. in. of card web	13	14	17
Yarn skein strength: 6/			
22s-------------------------------pounds	126 (139)	199 (133)	121 (136)
50s-------------------------------pounds	44 (49)	41 (47)	42 (47)
Average break factor 7/	2486 (2754)	2334 (2638)	2381 (2671)
Yarn appearance: 6/			
22s--------------------------------grade	B (B+)	B (B+)	C+(B)
50s--------------------------------grade	C+(C+)	C+(C+)	C (C+)
Average index 8/	105 (110)	105 (110)	95 (105)

1/ Fiber fineness and maturity in combination, as measured on untreated samples.

2/ Determined by the Causticaire method using the Micronaire instrument.

3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.

4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. R_d values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.

5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.

6/ Data in parentheses are for combed yarn process.

7/ Based on yarn skein strength of the two yarn numbers spun.

8/ Based on two numbers spun. Index of average quality equals 100.